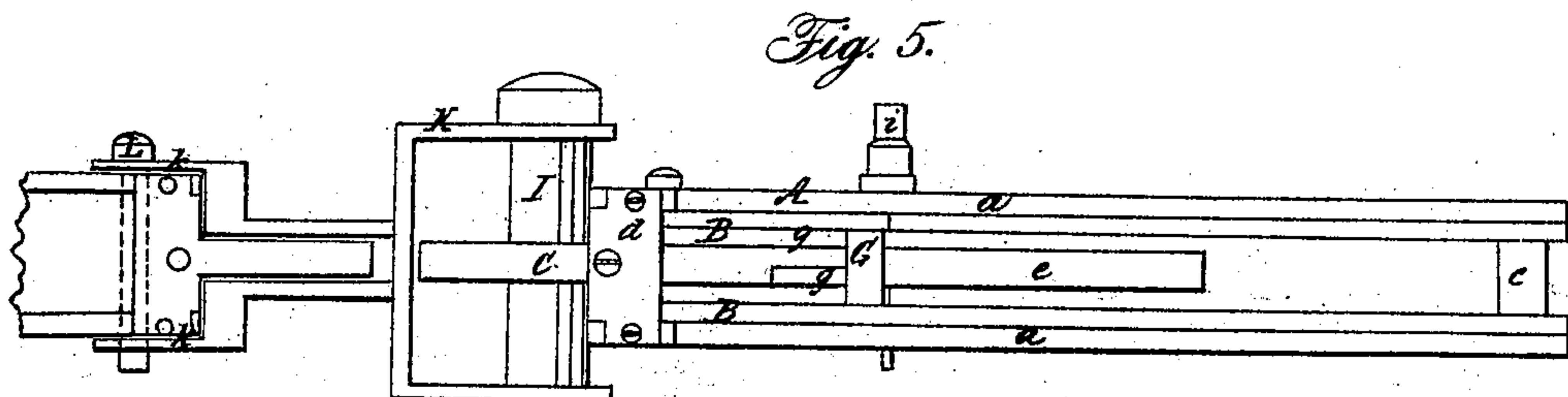
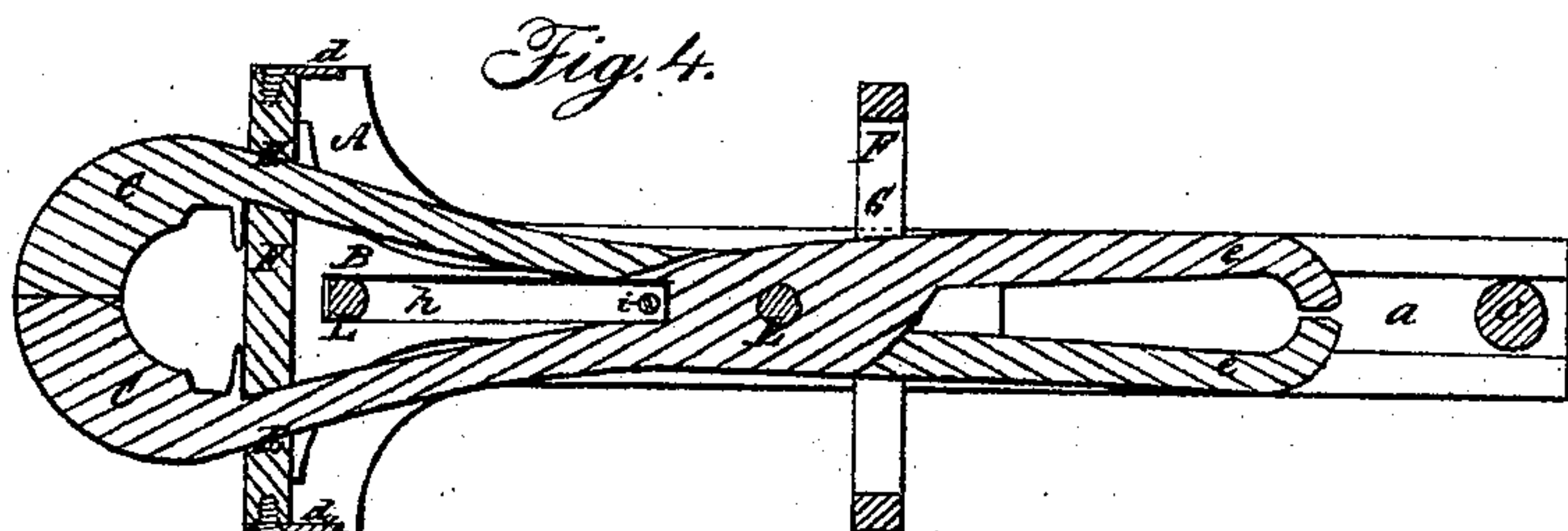
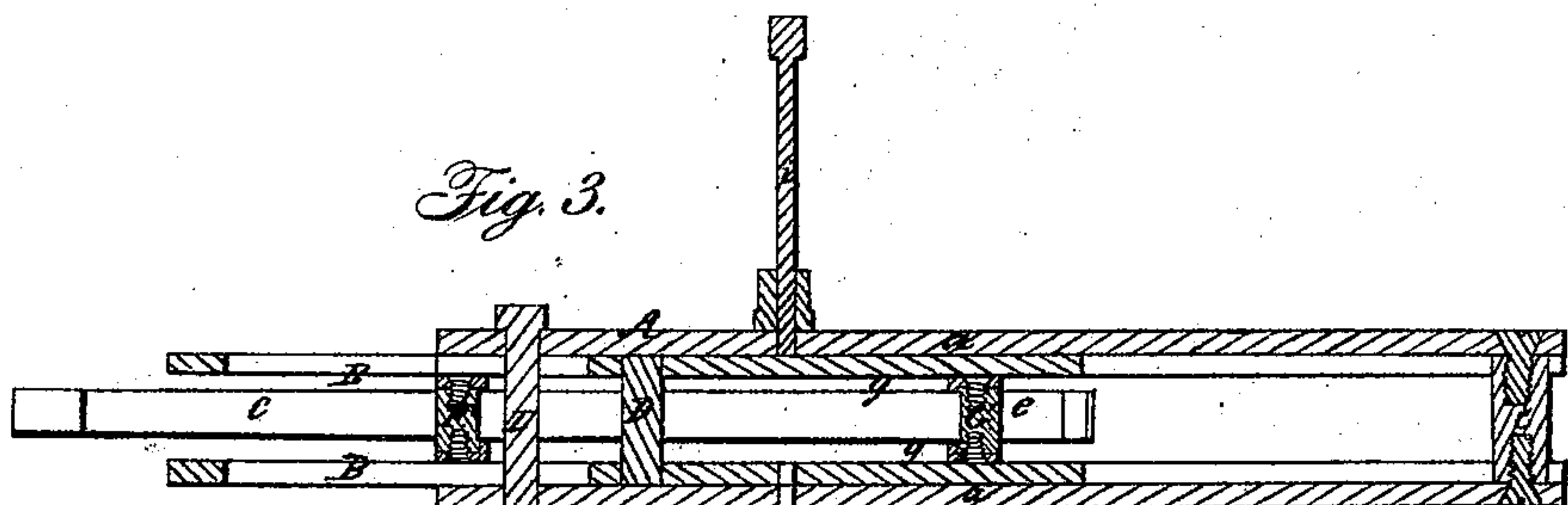
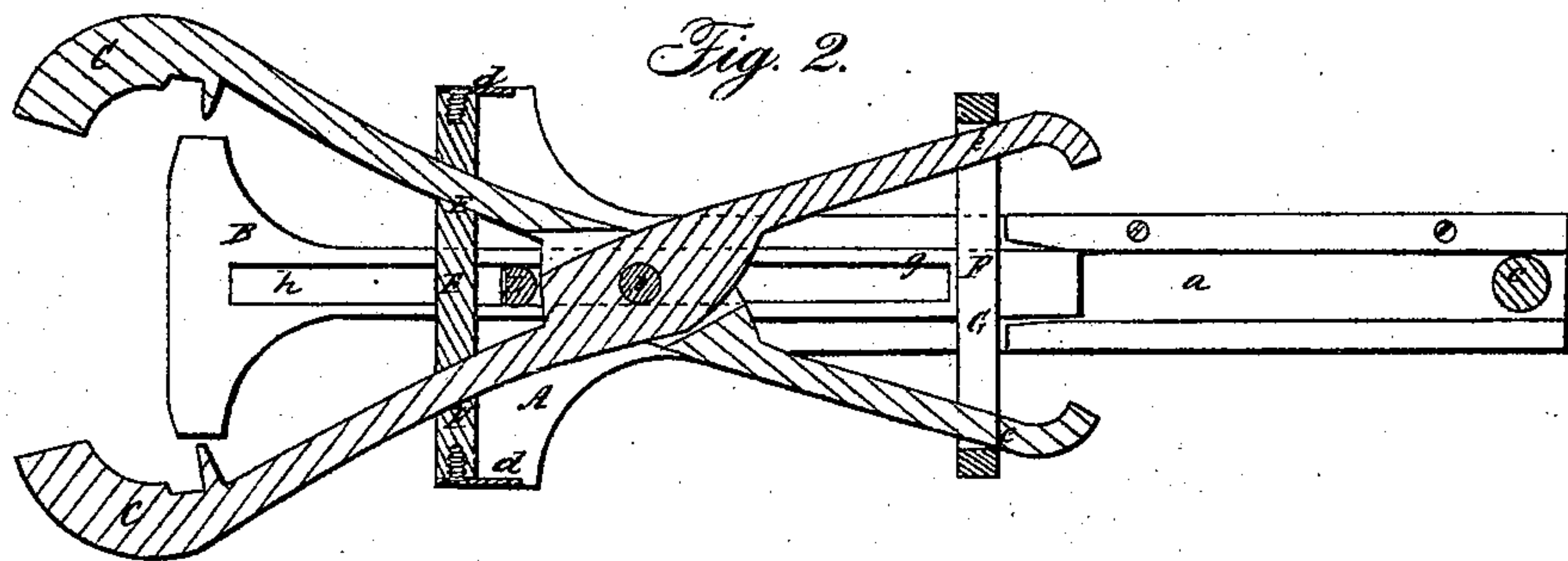
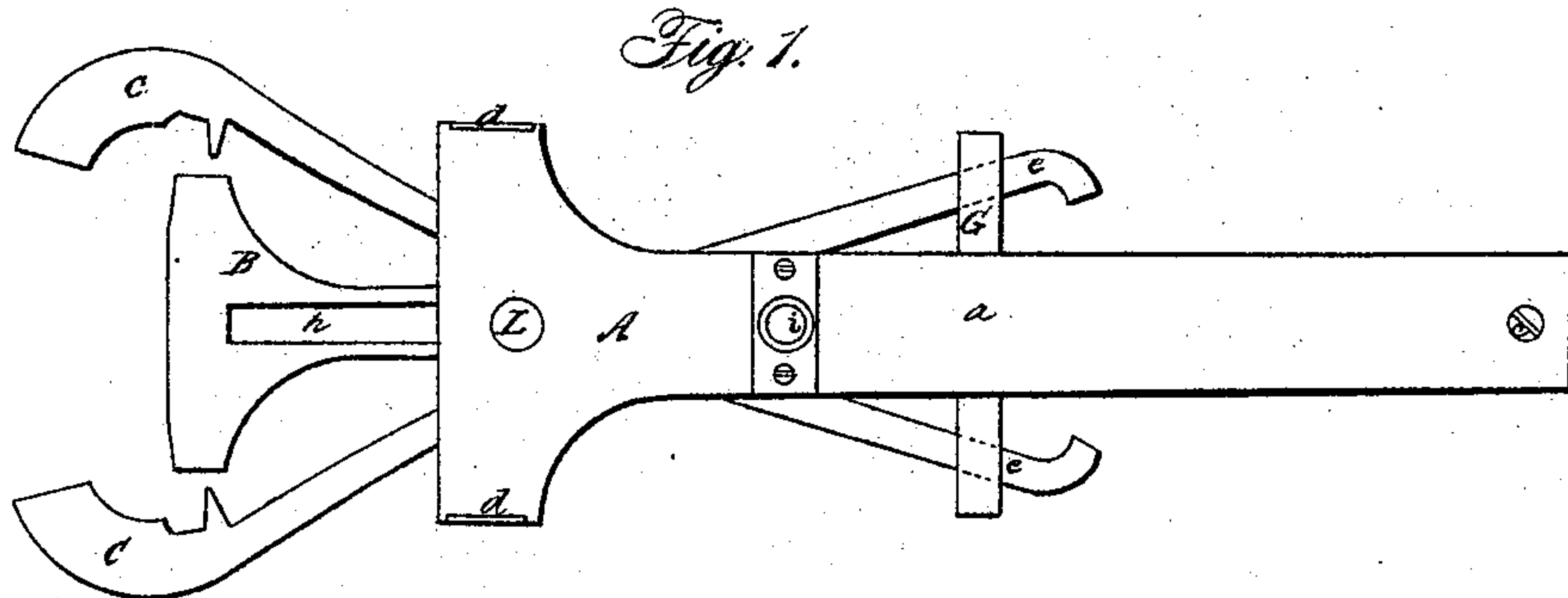


J. B. WITHERLE.

Car Coupling.

No. 15,355.

Patented July 15, 1856.





# UNITED STATES PATENT OFFICE.

JOHN B. WITHERLE, OF UPTON, MASSACHUSETTS.

## CAR-COUPLING.

Specification of Letters Patent No. 15,355, dated July 15, 1856.

*To all whom it may concern:*

Be it known that I, JOHN B. WITHERLE, of Upton, in the county of Worcester and State of Massachusetts, have invented a new and useful Railway-Car Coupling; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1, denotes a top view of my invention: Fig. 2, is a horizontal section, while Fig. 3, is a vertical and longitudinal section of it. In these drawings the apparatus is exhibited with its curved graspers expanded or in a position ready for the shackling pin to be received into it. In Fig. 4, is exhibited a horizontal section of the apparatus showing the position of its parts when the graspers are closed, upon a shackling pin: Fig. 5, is a side view of the apparatus and representing the manner in which the frame or holder of the shackling pin may be applied and fixed to it.

A, in the said drawings is what is usually termed a "draw bar" which in my apparatus is constructed of two parallel metallic plates or bars, *a, a*, placed at a suitable distance asunder and united at their ends by connections or cross ties as seen at *c*, and *d, d*. In the said draw bar or frame A, there is made to slide longitudinally, what may be termed the retractor B, B, such being made to carry two curved levers or graspers, C, C, which cross one another like the blades of a pair of shears and turn upon a common pin or fulcrum, D, extending through them at their decussation, and the retractor, B, B. Each of the graspers works through a contracting guide or passage E, formed through a stationary bar, F, which is extended horizontally between the front ends of the bars, *a, a*, such contracting guides causing the front arms of the graspers to approach one another when the said graspers are moved into the draw bar A, by pressure exerted against the retractor, B. It will also be seen that whenever the graspers are pulled forwardly these guides will also operate to open them apart or cause them to recede from one another until their tail arms, *e, e*, bring up against the ends of a slot F', made through a stationary cross bar G, which is supported in position by two horizontal bars, *g, g*, extended back-

ward from the transverse bar F and on opposite sides of the graspers as seen in the drawings. Each retractor bar, B, has a long slot *h*, formed longitudinally through it, the posterior end of such slot being just in rear of a vertical pin, *i*, when the graspers are closed, the pin under such circumstances passing down through the slot, *h*, and serving to prevent the graspers from being drawn forward. When the graspers are opened apart, the pin rests on the upper retractor bar B, as seen in Fig. 3, and falls by its gravity as soon as the front end of the graspers meet together. The shackle pin is shown at I, as supported by a frame K, which is so made as to be capable of being applied to a draw bar as seen in Fig. 5, and secured thereto by a pin, L, extended down through it and the draw bar—the cheeks *k, k*, of the frame, K, extending over or receiving between them the end of the draw bar, and the projecting ends of the graspers as represented in said figure.

In operating with my improved coupling, the shackle pin is connected to the draw bar of one railway carriage, while the coupling apparatus is applied to that of another carriage. During the approach of one carriage toward the other, either the shackling pin will be moved against the retractor, or the latter against the former, the retractor under such circumstances being so moved as to force backward the graspers and in connection with the retracting guides cause said graspers to approach one another and lock upon or embrace the shackle pin.

By applying the shackle pin to the draw bar, by means of a detachable frame and a pin as described it may not only be connected with another draw bar of the two carriages, but in case the coupling apparatus should accidentally become inoperative from any cause while it is in use, the two carriages may be disconnected, by simply withdrawing the pin, L, from the frame K, and the draw bar through which it may extend.

When the two carriages are in connection and it may be desirable to disconnect them, the bolt or pin, I is to be drawn upward entirely above the upper retractor bar, B. Under these circumstances, if one carriage is moved from the other the action of the coupling pin I, upon the graspers will be such as to pull them forward on their draw

bar and consequently detach them from their grasp upon itself.

I do not claim the employment of a sliding retractor for opening nipper levers C, C, moving on a stationary fulcrum, but

What I do claim is—

Applying the sliding retractor and the curved graspers together so that the fulcrum of the latter shall be movable with the

retractor, and the whole be made to operate in other respects substantially as specified. 10

In testimony whereof I have hereunto set my signature this twenty seventh day of June A. D. 1853.

JOHN B. WITHERLE.

Witnesses:

D. J. KING,

J. W. MERRILL.